



# COLLAPSIBLE PULL-UP BAR (+ HANG BOARD)

## Materials:

- 1 – 4x4 Treated Lumber
- 1 – 2x4 SPF Lumber
- 1 – 1 Inch Nipple Black Steel Pipe (to size)
- 2 – 1 Inch Nipple Black Steel Pipe x12 Inches
- 2 – 1 Inch Galvanized Steel Elbow
- 2 – 1 Inch Fitting Black Iron Floor Flange
- 8 – ¼x4 Ink Lag Screws (Hex Head)
- 8 – ¾ Inch Washers
- 5 – 4” Door Butt Hinges (Ideally Steel)
- 4 – Toggle Latch Clamps
- 2 – Brass Door Chain Locks
- 1 – Hang board (of choice)
- 40 – #8 1½” Wood Screws
- 16 – #8 1” Wood Screws
- 5 – #8 3” Wood Screws
- 8 – #12 1” Wood Screws
- Varathane Wood Stain and Seal

## Tools:

- Wood Planer
- Chop Saw
- Drill
- Roberts Head Bit
- ¾” Drill Bit
- 9/64” Drill Bit
- Chisel
- Hammer

## Steps:

1. Depending on the length of pipe you can get from your local hardware, you may need to get it trimmed. Most stores will cut your pipe to length for you. Make sure you get each end threaded when it is cut.
  - a. The length of your bar will be dependent on you. I decided on a 4’ length because it fit the space, and I wanted something akin to the bar at my local gym.
2. Cut your 4x4 and 2x4 lumber boards to 8” longer than your bar. My boards were cut to 56”.
3. I then planed the 4x4 lumber board to flatten it and reduce it to a dimension of 3x4.
  - a. I planed it down to achieve a flatter look and to shape out the board better.
4. Next, I determined where the ceiling joists would sit on the 4x4 when installed and evenly spaced the 5 hinges along the edge – butts outside of the board (similar to a door). I marked the hinge locations and then chiseled the space out to fit each hinge flush. I marked the same location on the 2x4 board and chiseled that space out as well.
  - a. See the image below for spacing across the boards.



5. Using a  $\frac{3}{4}$ " drill bit, I drilled into the 4x4 for the lag screws to sink into when installed. Pilot holes were drilled into each hole using a  $\frac{9}{64}$ " bit.
6. Both boards were then stained with Varathane wood stain and seal and allowed to dry for 24hrs.
7. Following a quick wash and wrap using hockey tape (on the long pipe) of each pipe, each piece was threaded together (including the flanges).
  - a. I happened to have leftover hockey tape from a previous project making a custom chalk brush. It gives the bar a nice texture and removes the need to paint it – which I would recommend because black steel pipe is very gross.
  - b. Make sure you tightly thread all your pipe pieces together to ensure they stay in place.
8. Using the #8  $1\frac{1}{2}$ " screws, the hinges were attached to the 2x4 board.
9. Using the #12 1" screws, the flanges/pull-up bar assembly were attached to the outer face (opposite of the hinges) of the 2x4.
10. I marked out the location for each lag screw on the ceiling (lined up to each joist) and then pilot drilled holes, using the  $\frac{9}{64}$ " bit, into each joist.
11. The clamps top halves (handle part) were attached (#8 1" screws) onto the 4x4 on the opposite side of the hinge butts (see image above). The 4x4 was then screwed into the joist using the lag screws, placing a single washer on each – make sure the lag screws are completely set.
12. (With help) 2x4 with the attached pull up bar was screwed by the hinges (#8  $1\frac{1}{2}$ "") to the 4x4.
13. The bottom half (hook) of the clamps were then placed to fit with on the 2x4 (with #8 1"screws).
14. With the assembly in place, the hang board was fitted and attached onto the 4x4 by #8 3" wood screws.
  - a. The hang board was fitted to have access to the top jugs/sloppers (ie. Just enough space for your fingers).
15. Unclamping the assembly, the pull-up bar was moved to the "closed" position. The brass door chain locks were situated to keep the bar in the up position and mounted to the ceiling.
16. ... and your done, enjoy 😊!